BY ORDER OF THE COMMANDER
AIR FORCE SPACE COMMAND

AIR FORCE SPACE COMMAND
INSTRUCTION 99-101

2 JANUARY 2001

Test and Evaluation

OPERATIONAL TEST AND EVALUATION (OT&E) FOR SPACE AND INTERCONTINENTAL BALLISTIC MISSILE (ICBM) SYSTEMS

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This instruction implements DoD Directive 5000.1, ***Defense Acquisition;*** Air Force Policy Directive (AFPD) 99-1, ***Test and Evaluation*** and Air Force Instruction 99-102, ***Operational Test and Evaluation***. It establishes procedures and guidance for conducting Operational Test and Evaluation (OT&E) within Air Force Space Command (AFSPC) specifically for space and ICBM systems. This instruction does not cover tests conducted by the Air Force Operational Test and Evaluation Center (AFOTEC). AFOTEC conducted tests are covered by AFOTEC Instruction (AFOTECI) 99-101, ***Management of Operational Test and Evaluation***. AFSPCI 99-101 focuses on the AFSPC OT&E processes, including the identification, assessment, assignment, planning, execution and reporting of test activities. The reporting requirements in this directive are exempt from report control symbol (RCS) licensing in accordance with AFI 37-124, ***The Information Collections and Reports Management Program; Collecting Internal, Public and Interagency Air Force Information Collections***. This instruction assigns responsibilities to AFSPC organizations that participate in OT&E and applies to Headquarters (HQ) AFSPC, subordinate units and external agencies that require the use of AFSPC operational assets for Test and Evaluation (T&E). This instruction also applies to AFSPC-gained Air Reserve Component (ARC) units performing AFSPC operations missions. It applies to Air Force Reserve Command (AFRC) units when published in the AFRCIND2 and to Air National Guard units performing AFSPC operations missions. Submit recommendation for changes to this publication to the HQ AFSPC Operations Training and Evaluation Division (HQ AFSPC/DOT), 150 Vandenberg St, Ste 1105, Peterson AFB CO 80914-4240, with an information copy to the Space Warfare Center (SWC), 730 Irwin Avenue, Suite 83, Schriever AFB CO 80912-7383.

SUMMARY OF REVISIONS

The principal revisions are extensive and too numerous to list here. The major changes are as follows: add ICBM test procedures previously published in AFSPCI 99-102, expands unit test procedures, defines installation and checkout, defines customized user agreement, changes glossary of term on test term changed in the revision of AFI 99-102, changes primary responsibility from for test from SWC/XR to

595th Test and Evaluation Group (TEG), further refines safety roles in test activities, add security concern to test activities, removes operational test activities from operational units, incorporates an appeal process to the HQ AFSPC/DO for operational tests not executed by the 595th TEG, implements new force development evaluation terminology, modifies the prioritization and executability process, revises the test plan approval authority, defines new terms and realigns some process responsibilities. A bar (|) indicates a revision from the previous edition.

1. Purpose for MAJCOM Conducted OT&E:

1.1. Purpose of AFSPC Conducted Operational Test & Evaluation (OT&E). AFSPC conducts test and evaluation to ensure the Air Force acquires and maintains operationally effective and suitable systems which meet user requirements and to identify and help resolve deficiencies.

1.2. Types of MAJCOM Conducted OT&E Activities. In accordance with AFI 99-102, MAJCOMs conduct the following types of OT&E-related activities: Force Development Evaluation (FDE), Tactics Development and Evaluation (TD&E), Weapons System Evaluation Program (WSEP), Advanced Concept Technology Demonstration (ACTD) and Battlelab Initiative (BI). Additionally, in accordance with Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 5119.01, 5 Dec 94, USCINCSPACE is directed to conduct an annual end-to-end test of the Integrated Tactical Warning and Attack Assessment (ITW/AA) System to ensure operational performance and system technical integrity. USCINCSPACE has directed AFSPC perform this end-to-end test for the Technical Performance Evaluation (TPE) program. AFSPC test units conduct FDEs, TD&Es, ACTDs, BIs and TPEs.

1.3. Scope of Testing. MAJCOM OT&E will be conducted in as realistic an operational environment as possible and practical. These conditions must be representative of both combat stress and peacetime operational conditions. Due to the nature of the systems under evaluation, it may not be practical to conduct ACTDs and BIs in realistic operational environments. Modeling and simulation (M&S) should be used to the maximum extent practical as a tool to help plan, augment, extend or enhance field test results. MAJCOM OT&E will be conducted to identify and help resolve deficiencies as early as possible.

1.3.1. ICBM FDE is divided into four programs: flight tests, Simulated Electronic Launch (SEL) tests, weapon system readiness evaluations and Higher Authority Communications/Rapid Message Processing Equipment (HAC/RMPE) Rapid Execution and Combat Targeting (REACT) software modification tests. Flight tests launch operational ICBMs in a peacetime environment in as near to the operational flight environment as possible. Flight tests are designated Glory Trips. SEL tests provide the most complete test of the deployed ICBM force from crew commit actions through issuance of [Minuteman]: first stage ignition signal [Peacekeeper]: launch eject gas generator ignition signal. SEL tests are designated as Giant Pace tests. The alert readiness of deployed ICBMs is verified by monthly weapon system evaluations designated as Olympic Play tests. Additionally, AFSPC conducts recurring HAC/RMPE software operational testing for the REACT console. REACT is an upgrade to the MM III command and control system. HAC/RMPE performs automated rapid message processing, error correction, duplicate message suppression and alarm integration for all emergency action messages received. AFSPC tests the HAC/RMPE operational software to ensure each software change meets AFSPC needs.

1.3.2. Tests normally employ operationally configured equipment. Modification of operational equipment for test purposes is governed by AFSPCI 21-104, ***Configuration Control Process***.

1.3.3. Those resources being used for OT&E will not normally retain, or be granted, a security priority designation. If the resource is of high monetary value, protection prescribed in AFI 31-209, ***Air Force Resource Protection Program***, should be applied. If the resource is an operational resource and will continue to be fully operational over the course of the test, the continuation of securing the resource IAW its designated priority may be appropriate. Host wing security forces should be coordinated with on all such issues.

1.4. General Objectives. AFSPC is responsible for conducting OT&E related activities for AFSPC space and missile systems.

1.4.1. AFSPC conducts FDE over the life of fielded systems to: periodically evaluate systems to ensure they continue to meet user requirements; refine employment doctrine and tactics in response to changing threats; develop or refine operational procedures and training programs; evaluate changes and verify correction of new deficiencies discovered after system deployment; explore non-materiel means of satisfying changing operational requirements during system sustainment and evaluate routine software block cycle changes, preplanned product improvements, modifications, upgrades, mission data updates and other improvements or changes during sustainment. AFSPC generally uses 3400 (O&M) funds to conduct FDE but may use procurement funds if appropriate.

1.4.2. HQ AFSPC Directorate of Operations (HQ AFSPC/DO) determines the FDE programs, as appropriate, for each AFSPC operational system. For modifications (hardware and software to include databases) to AFSPC operational systems, OT&E is typically conducted on those changes directly affecting or with the potential to affect mission accomplishment. Customers identify testing needs depending on the risk associated with mission failure.

1.4.3. Installation and Checkout (I&C). Wing-level sustainment functions may be verified using Installation and Checkout (I&C) procedures. While it is beyond the purpose of this instruction to provide an all-encompassing definition of I&C, the intent is to provide enough information to distinguish the basic difference between I&C and OT&E. The examples provided in this instruction are to help illustrate I&C, not to limit I&C applications. I&C is not OT&E. I&C is inherently a wing-level sustainment function. As such, it is up to each wing to develop their own I&C guidelines. I&C verifies system operations after a change to the system (i.e., a routine database change, a Form, Fit or Function change, etc.). I&C demonstrates the system is functional after a basic change to the system has been made (i.e., Does the system work?). OT&E goes a step further and determines the systems operational effectiveness and/or suitability (i.e., How well does the system work and can operations be sustained?).

1.4.4. With the exception of ICBM flight testing, the majority of AFSPC OT&E is conducted at the operational location using operational equipment and personnel. This is due to the one-of-a-kind and non-relocatable nature of many of AFSPC's systems and support infrastructure.

1.5. ICBM Test Objectives. AFSPC conducts an ICBM FDE program (formerly the ICBM Follow-on Operational Test and Evaluation (FOT&E) program) as directed by the Chairman, Joint Chiefs of Staff, to provide the USCINCSTRAT Single Integrated Operational Plan (SIOP) accuracy and reliability planning factors.

1.5.1. Operational Test Launch (OTL) Objectives. Basic objectives of the OTL program are to establish SIOP accuracy and reliability planning factors under representative operational test conditions; detect trends or changes in weapon system accuracy and reliability; identify areas for weapon system modification/improvement; and verify operational effectiveness and suitability. To achieve these basic objectives, individual mission test objectives are identified as category I, II, or III.

1.5.1.1. Category I. Achievement of category I objectives is mandatory for a successful program, mission, or test. Not achieving a category I objective would significantly impact program schedules, costs, and verification of system performance. The Commander, 576th Flight Test Squadron (576 FLTS/CC), in coordination with the designated 595th Test and Evaluation Group (TEG) representative, can waive category I OTL objectives.

1.5.1.2. Category II. Achievement of category II objectives is required to make the program, mission, or test a complete success. These objectives could be waived due to performance, cost, time, or other constraints. A launch will not be rescheduled to meet a category II objective. A launch countdown will not be held to achieve a category II objective if the hold would adversely affect a category I objective. The 576 FLTS/CC can waive category II OTL objectives.

1.5.1.3. Category III. Achievement of a category III objective is desired for design or environmental research, certain Associated Operations, or a supporting engineering effort. Generally, these objectives would be beneficial to achieve if support can be provided within existing support agency capabilities. A launch countdown will not be rescheduled or held to achieve a category III objective. The 576 FLTS/CC can waive a category III objective.

1.5.2. SEL Objectives. The basic SEL objectives are to assess reliability of ICBM weapon systems in their deployed environment. SEL objectives are divided into three categories; primary, secondary, and special.

1.5.2.1. Primary. Achievement of primary objectives is mandatory for a successful program or test. Primary objectives include: verifying the capability of the launch control center (LCC) and the airborne launch control center (ALCC) command and control system to process required launch commands, the capability of the launch facility (LF) ground system electronics processing and missile guidance ground program systems to process the launch sequence during the terminal countdown sequence, and reliability of the ICBM weapon system. Only the 576 FLTS/CC or operations officer may waive primary objectives.

1.5.2.2. Secondary. Achievement of secondary objectives is required to make the program or test a complete success. These objectives could be waived due to performance, cost, time, or other constraints. The 576 FLTS/CC or operations officer or designated representative may waive secondary objectives.

1.5.2.3. Special. Achievement of special objectives can either be primary or secondary for a successful program or test. Special objectives are test specific. Waiver authority of special objectives will be identified in the Test Order and/or Test Plan.

1.5.3. Weapon System Readiness Evaluation Objectives. The purpose of this FDE program is to verify the readiness status of the ICBM alert force and provide data for estimating launch reliability throughout the life cycle of the deployed weapon system.

1.5.4. HAC/RMPE REACT Objectives. The purpose of this FDE program is to verify changes to HAC/RMPE REACT operational software meets AFSPC needs.

1.6. Space Systems Test Objectives. Objectives are as stated in paragraph **1.4.1.** and are achieved in a variety of ways. FDEs are conducted on space systems (to include the ITW/AA network) to ensure their continuing compliance with requirements on a recurring basis and after modifications or upgrades. Tactics Development and Evaluation (TD&E), a subset of FDE, is conducted to research, demonstrate, exercise, analyze and evaluate specific employment tactics against anticipated threats and to further exploit system capabilities. TD&E uses the same policies and accomplishes many of the same goals as FDE.

2. Procedures and Guidance:

2.1. Program Management Directive (PMD) - Directed Testing. PMDs may specify AFSPC's level of participation in OT&E activities. For PMD-directed programs, Test and Evaluation Master Plans (TEMPs) or the OT&E portion of Single Acquisition Management Plans (SAMPs) are developed by the implementing System Program Office (SPO) with inputs from AFOTEC, HQ AFSPC and the applicable AFSPC test squadrons. TEMPs and SAMPs provide a comprehensive outline of all test efforts. HQ AFSPC directorates, 595th TEG and the applicable test squadron review all SAMPs and TEMPs, including those associated with system modifications.

2.2. AFOTEC-Conducted OT&E. AFOTEC conducts operational tests on Acquisition Category (ACAT) I through III programs and those programs on the Office of Secretary of Defense (OSD) oversight list. The majority of AFOTEC testing involves Initial Operational Test & Evaluation (IOT&E), Qualification Operational Test and Evaluation (QOT&E), Early Operational Assessments (EOA), Operational Assessments (OA) and Operational Utility Evaluations (OUE) in support of the acquisition process prior to the Milestone III decision. AFOTEC conducts FOT&E after Milestone III to resolve test issues officially deferred by the Milestone Decision Authority. Additionally, AFOTEC may conduct ACTDs and BIs. For further guidance see AFOTECI 99-101, ***Management of Operational Test and Evaluation***, and AFOTEC Handbook (AFOTECH) 99-101, ***Test Management and Policy Handbook***. The HQ AFSPC Directorate of Requirements (HQ AFSPC/DR) is the command lead for interfacing with AFOTEC on all AFOTEC-conducted OT&E matters and will coordinate AFOTEC's test concepts with applicable organizations within the command.

2.2.1. AFOTEC may participate and/or assist in AFSPC-conducted operational testing upon AFSPC command lead request with HQ AFSPC/DO coordination.

2.2.2. Due to the long duration of some AFOTEC OT&E tests, some systems or parts of systems may be used operationally prior to the formal conclusion of OT&E. Additionally, system changes may occur which are not tested as part of the AFOTEC OT&E test. In those cases, AFSPC is responsible for conducting OT&E as required.

2.3. AFSPC-Conducted OT&E:

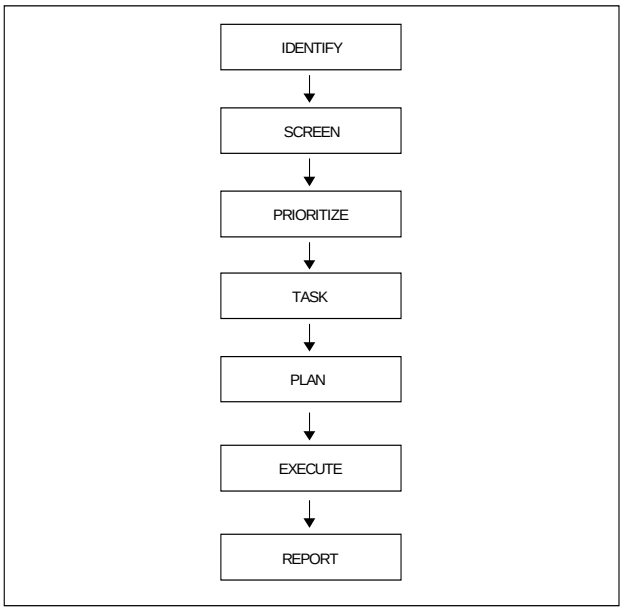
2.3.1. HQ AFSPC/DO, as delegated by AFSPC/CV, provides policy and guidance for all AFSPC-conducted space and ICBM OT&E programs. HQ AFSPC/DOT supports HQ AFSPC/DO in performing this responsibility.

2.3.2. The SWC is the AFSPC Test and Evaluation Agency (TEA). The SWC is responsible for test management for all AFSPC-conducted testing.

2.3.2.1. AFSPC test squadrons plan, execute and report on testing of space and ICBM systems. They serve as the Responsible Test Agency (RTA) for AFSPC-conducted OT&E as described in paragraphs **1.2.** and **2.2.2.**

2.3.2.2. Figure 1. shows an overview of the seven-step process used to accomplish AFSPC-conducted testing. Each step is described in paragraphs **4.** through **10.** of this instruction.

Figure 1. AFSPC Test Process Overview.



2.3.3. Operational units may only perform non-OT&E functions (i.e., I&C). This means operational units may not perform the test management functions that are the responsibility of the 595th TEG. Operational units will always be used to operate the operational systems being tested and to provide technical expertise to the RTA. Paragraphs **3.10.** and **3.13.** contain more information on wing commander and operational unit's roles in OT&E.

2.3.4. Each weapon system program element that requires OT&E support is responsible to request, budget for and fund their particular tests.

2.4. Test Liaisons. HQ AFSPC/DOT, 595th TEG and test squadrons should maintain active liaisons with test and evaluation agencies at HQ USAF, HQ USSPACECOM/J6, HQ AFSPC/SCV, AFOTEC, Air Force Materiel Command (AFMC), other MAJCOMs and service branches to prevent duplication of effort, achieve economies of scale in the testing process and evaluate combined test opportunities.

2.5. External Agency Testing Using AFSPC Operational Assets. Any agency external to AFSPC wishing to conduct testing on or using AFSPC operational assets must obtain HQ AFSPC/DO test plan approval prior to test execution. An operational asset is any AFSPC system, component or unit used to conduct or support an AFSPC or Air Force mission. External agencies should develop their test plan IAW the recommended test plan format in AFI 99-102 (abbreviations and acronyms may be

placed in the back). In order to ensure adequate time for approval, the originator should submit their test plan to HQ AFSPC/DOT no later than 60 days prior to the scheduled test start date. See **Table A2.1.** for coordination and approval requirements. AFOTEC-conducted and Major Range & Test Facility Base (MRTFB) testing is exempt from this policy.

2.6. Commercial Use of Operational Assets (30 SW/45 SW). Commercial Use of Operational Assets is covered in AFSPCI 10-1215, ***Support to Commercial Space Launch Activities***. Commercial users are exempt from the remainder of this instruction.

3. Responsibilities:

3.1. HQ AFSPC Director of Operations (DO):

3.1.1. Determines the FDE programs, as appropriate, for each AFSPC operational system.

3.1.2. Identifies specific test needs IAW paragraph **4.**

3.1.3. Issues test orders and test order annexes.

3.1.4. Approves all test plans and test plan annexes involving AFSPC operational assets as designated in **Table A2.1.**

3.1.5. Release reports for testing directed by AFSPC test order as designated in **Table A2.2.**

3.1.6. Ensures AFSPC testing requirements (funds and manpower) are accounted for in the planning, programming and budgeting cycle.

3.1.7. Ensures funds and manpower are available for all AFSPC-conducted test programs. Coordinates with 595th TEG before releasing resources to support testing.

3.1.8. Processes requests for release of AFSPC-conducted test information.

3.1.9. Acts as command focal point for interfacing with other commands and external agencies for non-AFOTEC and non-Major Range Test Facility Base (MRTFB) related test programs.

3.1.10. Chairs Annual Test Prioritization Integrated Product Team (IPT).

3.1.11. Approves AFSPC test prioritization list.

3.1.12. Provides RTA with CONOPS, when available, for system being tested.

3.2. HQ AFSPC Director of Requirements (DR):

3.2.1. Identifies specific test needs IAW paragraph **4.**

3.2.2. Provides command-approved operational requirements for all programs initiated by DR and tested by AFSPC or AFOTEC.

3.2.3. Acts as command lead for interfacing with AFOTEC and the applicable SPO on all acquisition program OT&E matters.

3.2.4. Consolidates and coordinates AFSPC responses to AFOTEC's documentation.

3.2.5. Ensures funds and resources (manpower) for testing are available for acquisition and modification programs for which DR is the command lead.

3.2.6. Notifies HQ AFSPC/DOT and 595th TEG on disposition of AFOTEC testing for a program.

3.2.7. Participates in the Annual Test Prioritization IPT.

3.3. HQ AFSPC Director of Logistics (LG):

3.3.1. Identifies specific test needs IAW paragraph **4.**

3.3.2. When requested by HQ AFSPC/DO or /DR, appoints a project officer to support the RTA with testing issues to include suitability of support equipment and technical data to include commercial manuals, Support Equipment Requirements Document (SERD) accuracy and completeness, Precision Measurement Equipment Laboratory (PMEL) requirements and support posture as part of an overarching logistics supportability review.

3.3.3. When requested by HQ AFSPC/DO or /DR, appoints a project officer to coordinate on matters concerning testing.

3.3.4. Approves waivers for ICBM munitions Technical Order (TO) procedures.

3.3.5. Participates in the Annual Test Prioritization IPT.

3.3.6. Performs detailed technical and management review of test plans and procedures for system test requirements as applicable.

3.4. HQ AFSPC Director of Communications and Information (SC):

3.4.1. Identifies specific test needs IAW paragraph **4.**

3.4.2. When requested by HQ AFSPC/DO or /DR, appoints a project officer to coordinate on matters concerning testing.

3.4.3. Performs detailed technical and management review of test plans and procedures for system test requirements as applicable.

3.4.4. For communications and information system acquisition and modification programs, advocates for funds and resources to support testing. When SC is the project manager, SC will advocate for funding and resources in coordination and cooperation with the customer and DO.

3.4.5. Participates in the Annual Test Prioritization IPT.

3.5. HQ AFSPC Director of Plans (XP):

3.5.1. Identifies specific test needs IAW paragraph **4.**

3.5.2. When requested by HQ AFSPC/DO or /DR, appoints a project officer to coordinate on matters concerning testing.

3.5.3. Validates manpower requirements and works with the command lead, command program element monitor and the requesting agency to provide the necessary authorizations to the RTA for the duration of the test, as applicable.

3.5.4. Provides guidance to HQ AFSPC/DOT regarding the releasability of test data to outside agencies and foreign nationals.

3.5.5. Participates in the Annual Test Prioritization IPT.

3.6. HQ AFSPC Director of Public Affairs (PA):

3.6.1. When requested by HQ AFSPC/DO or /DR, appoints a project officer to coordinate on matters concerning testing.

3.6.2. Is the focal point for the conduct of public activities regarding specific OT&E projects and the OT&E program as a whole in accordance with AFPD and AFI 35-series guidance, as well as guidance provided herein or by higher headquarters.

3.6.3. Coordinates with HQ AFSPC/DOT to determine the releasability of test data to outside agencies.

3.7. HQ AFSPC Director of Security (SF):

3.7.1. Determines if any resource to be used during testing is currently designated as a priority resource. If so, provides a recommendation to HQ AFSPC/DO as to the status of that designation during the course of testing.

3.7.2. Participates in the Annual Test Prioritization IPT, as requested.

3.8. Numbered Air Force Commander (NAF/CC):

3.8.1. Identifies specific test needs IAW paragraph **4.**

3.8.2. Directs appropriate operational units provide a test support manager and required test support team members to operate systems under test and comply with test related tasks as specified in AFSPC issued Test Orders.

3.8.3. Coordinates on all external-agency testing of AFSPC assets.

3.8.4. (20 AF) Approves waivers to TO procedures related to operational weapon system components/hardware. (14 AF) Coordinates test related waivers through the 595th TEG, the applicable SPO and safety office.

3.8.5. Participates in the Annual Test Prioritization IPT, as requested.

3.8.6. Maintains situation awareness of operational system impacts due to testing.

3.9. Space Warfare Center Commander (SWC/CC):

3.9.1. Identifies specific test needs IAW paragraph 4.

3.9.2. Maintains out-year test forecast IAW paragraph 4.

3.9.3. Assigns test responsibility as outlined in an AFSPC test order to an appropriate 595th TEG test squadron or SWC division, as applicable.

3.9.4. Coordinates on test plans as designated in **Table A2.1.**

3.9.5. Approves all test reports as designated in **Table A2.2.**

3.9.6. Approves waivers to TO procedures related to test-unique components/hardware. Coordinates operational equipment waivers through NAF/LG, applicable SPO and safety office as appropriate.

3.9.7. Coordinates with HQ AFSPC Program Element Monitors (PEM) to authorize release of resources to test agencies IAW test orders.

3.9.8. Screens all test request inputs to allow the most efficient use of test resources.

3.9.9. Participates in the Annual Test Prioritization IPT.

3.9.10. Develops/approves AFSPC Executable List, forwards to HQ AFSPC/DOT for review.

3.10. Wing Commander:

3.10.1. Identifies specific test needs IAW paragraph **4.**

3.10.2. Assigns a unit test support manager to support the test squadron's test manager in executing the test.

3.10.3. Coordinates on all external-agency testing of AFSPC assets.

3.10.4. Reviews all test plans developed by a test squadron to support wing-testing requirements (includes wing level safety and environmental review).

3.10.5. Participates in the Annual Test Prioritization IPT, as requested.

3.10.6. Maintains situation awareness of operational system impacts due to testing.

3.10.7. Determines activities that may be verified by I&C. Develops wing-level I&C guidance.

3.11. Responsible Test Agency:

3.11.1. Performs day-to-day test management.

3.11.2. Works directly with the test requester to ensure operational program requirements are understood.

3.11.3. Develops a Test Resources Plan (TRP), except for ICBM FDE testing, outlining all resources for test conduct. This TRP will form the basis for resources allocated to a particular test.

3.11.4. Executes the test budget for tests assigned through AFSPC test orders.

3.11.5. Performs mission (576 FLTS only) and test planning, test execution and test reporting as directed by AFSPC test orders.

3.11.6. Serves as waiver authority (IAW paragraphs **1.5.1.** to **1.5.1.3.**) for test objectives as specified in the test order.

3.11.7. Performs analysis of flight data. Develops hardware and software tools necessary to ensure data required to support FDE program objectives are collected and analyzed.

3.11.8. Investigates flight anomalies.

3.12. Participating Test Agency (PTA):

3.12.1. Assists the RTA IAW the test order.

3.12.2. Reviews test plan, test plan annexes and test reports and provides comments to the RTA.

3.12.3. Attends test-related meetings at the request of the RTA.

3.12.4. Provides testing expertise to ensure the test approach and methodology will provide the information required by the test requester.

3.13. Operational Unit/Test Support Organization. Typically the operational unit accepting the system or modification.

3.13.1. Assists the RTA in developing the test plan and detailed test procedures.

3.13.2. Assists in developing test criteria and metrics.

3.13.3. Operates the system during test execution.

3.13.4. Assists in data collection as required.

3.13.5. Participates in all data scoring boards.

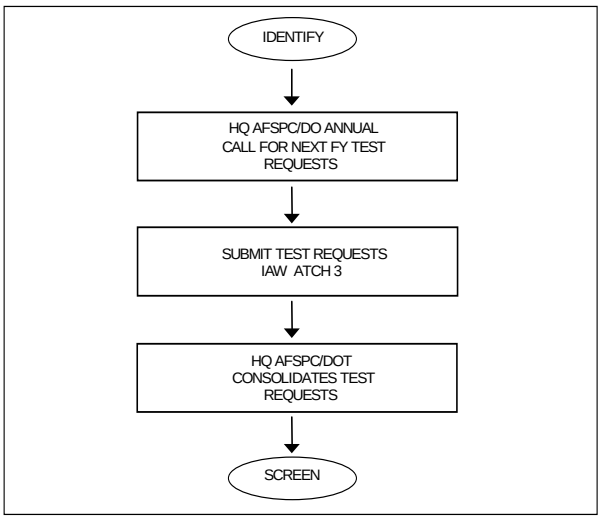
3.13.6. Assists in mission-specific analysis as required.

4. AFSPC Test Identification:

4.1. Test Request Objective. For all AFSPC-conducted test requirements, appropriate AFSPC units/ organizations must submit a Test Request (TR). The TR is the vehicle to identify test requirements, determine command prioritization and 595th TEG resource estimates (if required) and ultimately to receive authority to use operational assets to support a test. See Figure 2 for the test identification process.

4.2. Test Request Process. During October each year, HQ AFSPC/DO requests HQ AFSPC directorates, NAFs, SWC and wings (operations group or wing CC level only) provide TRs for their next fiscal year's test needs through their chain of command to HQ AFSPC/DOT with an info copy to the applicable NAF/CV.

Figure 2. Test Identification Flowchart.



4.3. Out-of-Cycle Test Requests. All requests for test assistance are normally submitted during October each year for testing needs during the next fiscal year. If an out-of-cycle test need is identified, immediately forward a TR to HQ AFSPC/DOT. If HQ AFSPC/DOT deems it appropriate, the TR is forwarded to the 595th TEG to determine resource requirements. The 595th TEG's response is returned to HQ AFSPC/DOT and evaluated for impact to the command's priority and executable list. The decision to provide command resources or involve the SWC is based on this evaluation. In most cases, if the 595th TEG is able to conduct the out-of-cycle test, HQ AFSPC/DOTO will conduct re-prioritization. However, if the 595th TEG is unable to conduct the out-of-cycle test due to schedule

or resource conflicts, HQ AFSPC/DOTO will re-prioritize and coordinate through the 3-Ltr Prioritization Board process described in paragraph **6.**

4.4. Test Forecast Objective. In order to identify future operational testing requirements, the 595th TEG will maintain an out-year (2-5 fiscal years beyond current fiscal year) test forecast. This forecast identifies all OT&E involving AFSPC operational assets.

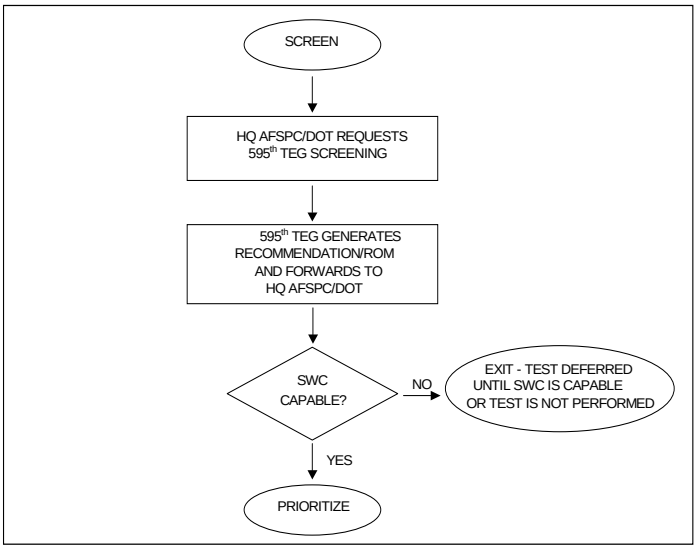
4.5. Test Forecast Process . During August each year, HQ AFSPC/DO requests HQ directorates, NAFs, SWC and wings provide test-forecast inputs to the 595th TEG. The 595th TEG will consolidate inputs and produce an annual test forecast. The test forecast inputs shall include, as a minimum, the unit supporting the test, title of the test, a short test description, type of test, unit point of contact and phone number, anticipated test start and stop dates and any other pertinent information.

5. AFSPC Test Screening:

5.1. Objective. As part of the prioritization process, the test squadrons screens TRs to further define the test requirements and associated resources needed to support those requirements. The test squadron's screening results in a recommendation to HQ AFSPC/DOT on their capability to support particular tests along with establishing a Rough Order of Magnitude (ROM) estimate of required test resources.

5.2. Process. HQ AFSPC/DOT forwards TRs to the 595th TEG. Within 45 days, the 595th TEG provides a recommendation to HQ AFSPC/DOT on their test concept and initial ROM to support the particular test. HQ AFSPC/DOT provides this information to the funding agency and includes it in the preparation for the Annual Test Prioritization IPT in January. See **Figure 3.** for a flowchart of the test screening process.

Figure 3. Test Screening Flowchart.

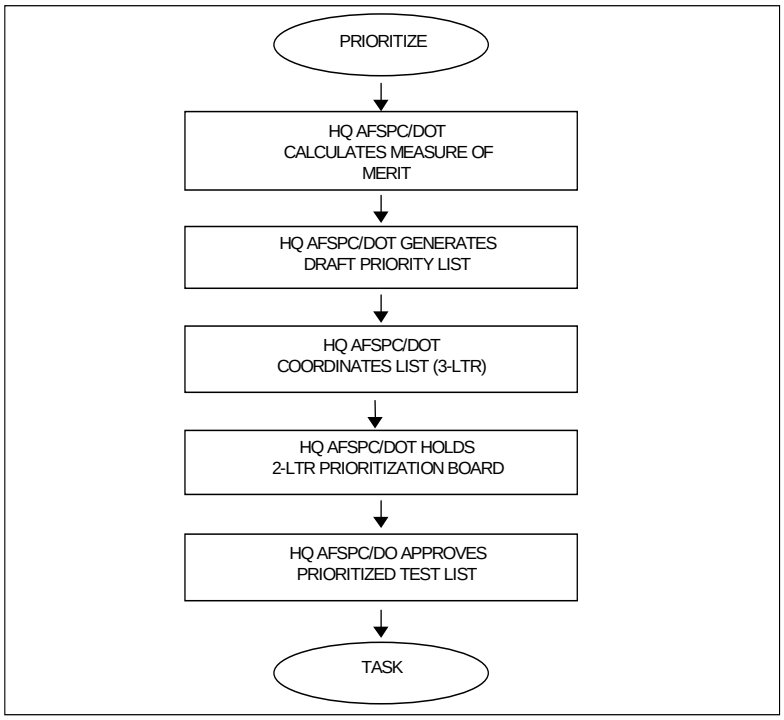


6. AFSPC Test Prioritization:

6.1. Objective. AFSPC prioritizes command test requirements to determine where to expend the command's limited test resources. The test priority list documents the command prioritization in a top-to-bottom ranking of each test using a measure of merit system. Each test's measure of merit is based on mission impact, time sensitivity, direction authority and program risk for the particular test.

6.2. Process. HQ AFSPC/DOT hosts an annual test prioritization board chaired by HQ AFSPC/DO and attended by appropriate HQ AFSPC directors and the SWC/CC. The board is held in January of each year to support the budgeting process and provide the 595th TEG adequate test planning time. HQ AFSPC/DOT is responsible for the agenda, notifying participants, conducting the meeting and publishing the minutes. HQ AFSPC/DOT enters each test into a draft priority order. The draft prioritized test list is reviewed and adjusted at a board consisting of all appropriate HQ AFSPC 3-letters offices. HQ AFSPC/DOT then takes the amended list to the annual test prioritization board for HQ AFSPC/DO review and approval. See **Figure 4.** for a flowchart of the test prioritization process.

Figure 4. Test Prioritization Flowchart.



7. AFSPC Test Tasking:

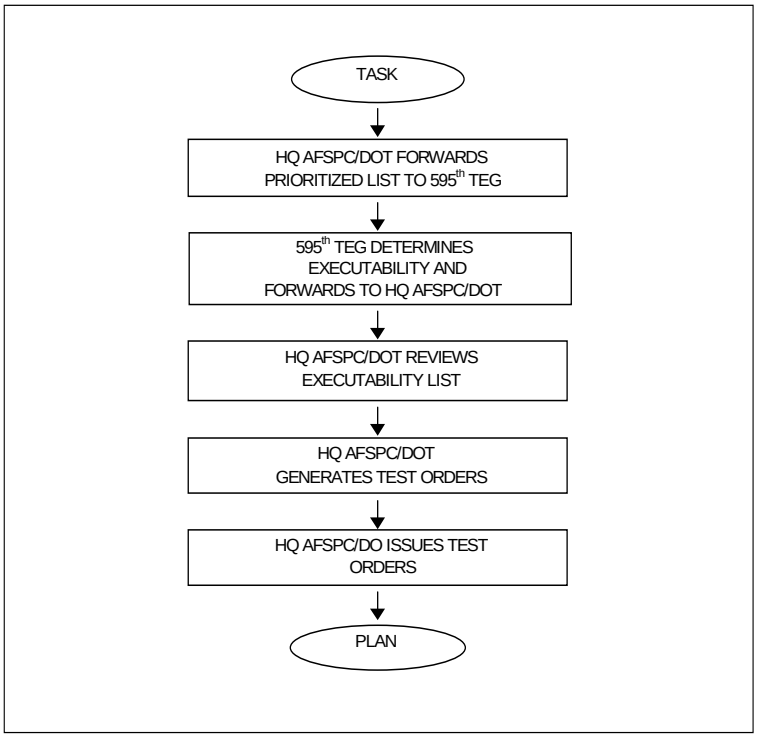
7.1. Objective. The 595th TEG determines executability to support the assignment of responsible test agency responsibilities for each test. HQ AFSPC/DO issues a test order to SWC/CC for all AFSPC tests deemed as executable. The test order defines the overall test objectives, defines tasks to support a test and provides authorization for test conduct. The test order can modify requirements of this instruction or add additional test unique requirements. In the event of a conflict between the test order and this instruction, the test order shall take precedence. For long duration tests or tests with changing requirements, a test order annex may be issued. In this case, the test order will specify general test program requirements. Detailed requirements for each event or test group will be specified in the annex.

7.2. Process. HQ AFSPC/DO provides the 595th TEG the command's prioritized list. The 595th TEG determines executability based on funding, timing and availability of test squadron manpower. The SWC forwards the test executable list to HQ AFSPC/DOT. Upon receipt of the test executable list, HQ AFSPC/DOT reviews the list and generates appropriate test orders for approval by HQ AFSPC/DO. HQ AFSPC/DO is the sole authority for approving test orders. Following HQ AFSPC/DO approval, HQ AFSPC/DOT distributes the test orders. See **Figure 5.** for a flow chart of the test tasking process and **Attachment 4** for the test order format.

7.3. Unexecutable Tests . Due to limited resources (i.e., manpower and funding), the 595th TEG may not be able to execute all tests identified on the command prioritized list. Therefore tests that fall below the executable line will be postponed or will not be performed. The decision not to perform/postpone a test that falls below the executable line may be appealed. The organization responsible for the test request may appeal the decision to the HQ AFSPC/DO. The appeal must demonstrate the critical mission impact if the test is not accomplished or is postponed. If the HQ AFSPC/DO concurs,

HQ AFSPC/DOTO will work with the 595th TEG to ensure the appropriate test squadron accomplishes the test.

Figure 5. Test Tasking Flowchart.

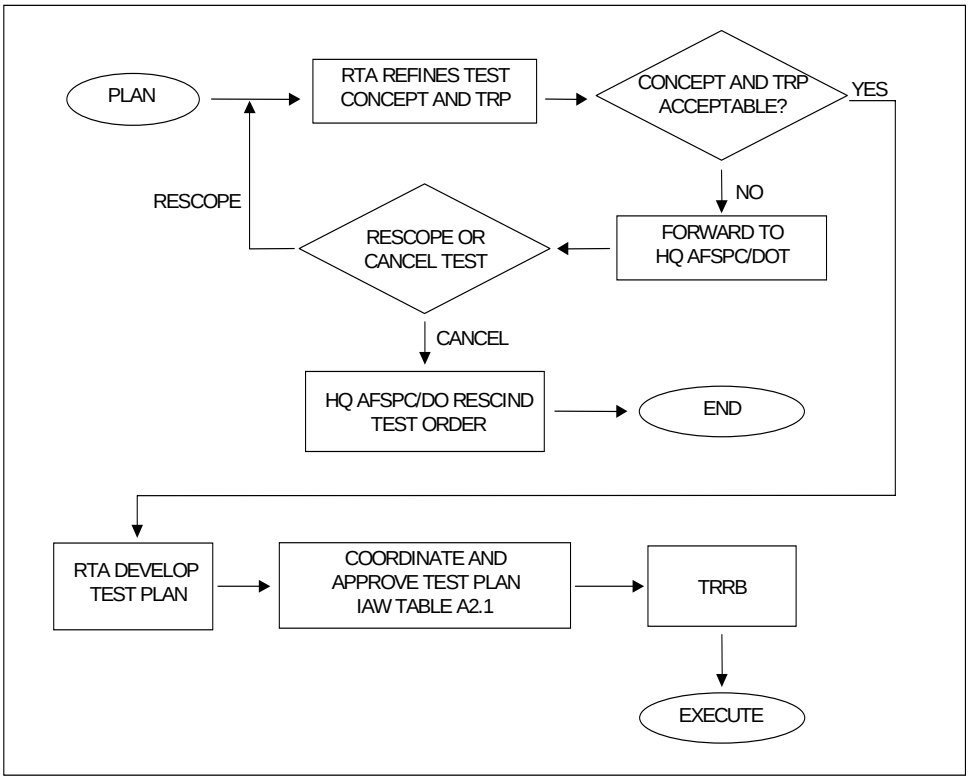


8. AFSPC Test Planning:

8.1. Objective. The test planning function provides the foundation for the execution of a test and is composed of a test plan and a TRP. Test plans define the test objectives, outline the procedures and methodology and serve as the foundation for development of Detailed Test Procedures (DTP). Test planning also identifies and mitigates environmental and safety hazards which may occur during testing. DTPs provide instructions that form the basis for day-to-day test mission scheduling, test control, data collection and management, analysis and reporting of results. DTPs may be incorporated in the test plan. The RTA determines if DTPs are required based upon the scope of the test and level of detail in the test plan. If DTPs are required, the RTA develops the DTPs in coordination with the affected operational unit. Test plans are approved IAW **Table A2.1.** prior to the conduct of any test event. The RTA develops a TRP that documents the resources necessary to conduct a test. The RTA uses this information to schedule test resources. HQ AFSPC uses this information to obtain funding. Prior to test conduct, all identified resources must be available for use by the RTA. Test plans should adhere to the recommended format contained in AFI 99-102 (abbreviations and acronyms may be placed in the back).

8.2. Process . **Figure 6.** shows an overview of the test plan development, review and approval process.

Figure 6. Test Planning Flowchart.



8.2.1. Test Plan. The RTA develops the test plan IAW AFI 99-102. The test plan should be approved no later than 5 days prior to the scheduled Test Readiness Review Board (TRRB) or the Launch Readiness Review (LRR) for ICBM flight tests. The test manager will submit two copies of the approved test plan to the Defense Technical Information Center (DTIC). **Table A2.1.** identifies the appropriate test plan approval authority.

8.2.1.1. Safety Planning. Safety planning, including Operational Risk Management (ORM), is key to overall test planning and preparation. Potential hazards will be identified and risk minimization procedures developed as necessary. The RTA will identify, prioritize and minimize hazards using the ORM process outlined in AFI 99-213 and AFPAM 91-215. Those risks that are identified as high will be brought to the attention of the test team and briefed at the TRRB by the wing hosting the test. Standard safety practices and procedures will not be compromised to accomplish test objectives. The TSM is responsible for coordinating the Test Plan through the wing safety office and/or the host base safety office at the test location.

8.2.1.2. Security Planning. If required, the test plan will be classified IAW the applicable system Security Classification Guide (SCG). In the event a SCG is not available, the command lead and/or the operational functional manager (e.g., HQ AFSPC/DOO, DOY, etc.) of the system under test will provide security classification guidance.

8.2.2. TRP. The RTA develops an updated TRP as specified in the test order. The 595th TEG will work with HQ AFSPC/DOT and the PEM to assist in the acquisition of all necessary resources. When required test resources are not available in the required time frame, the RTA will request guidance from HQ AFSPC/DOT.

8.2.2.1. Manpower. The RTA determines the manpower authorization requirements for tests. HQ AFSPC Manpower Division (XPM) validates manpower requirements and works with the command lead, command program element monitor and the requesting agency to provide the necessary authorizations to the RTA for the duration of the test. Programs may require only temporary personnel and resources from the supporting organization. These personnel shall support the RTA as necessary.

8.2.2.2. Support. The Test Manager (TM) is the person from the RTA responsible for overall test management and the focal point for test planning, conduct and reporting. At the TM's discretion, he/she develops a Memorandum of Agreement (MOA), signed by the host and tenant approval officials, to support test activities requiring the use of host base resources. AFI 25-201 provides guidance on host-tenant support agreements. The TM provides a signed copy of the agreement to HQ AFSPC/DOT.

8.3. Critical Operational Issues (COI). COIs are key questions that must be examined in test and evaluation to determine the system's capability to perform its mission. COIs are normally phrased as a question to be answered in evaluating a system's operational effectiveness or suitability. COIs can be obtained in several ways. COIs may be provided as a top-down directed issue; however, they are usually developed by the RTA working with the customer and HQ AFSPC command lead. COIs help test planners and decision-makers focus on the real "show stopping" concerns.

8.4. Measures. The RTA works with the customer requesting the test to develop Measures of Effectiveness (MOE) and Measures of Performance (MOP) from the HQ AFSPC "command approved" requirements. The RTA must develop specific MOEs at the operational task level or below that are objectively measurable in test. MOEs are used singularly or in combination in the test concept and test plan to answer the COIs. MOPs are quantitative (or qualitative) measures of a systems capabilities or characteristics. They articulate the lowest levels of physical performance such as weight, speed, or range. MOPs should relate to MOEs such that the effects in the change in MOP can be related to a change in the MOE. Multiple MOPs may be aggregated to support an MOE or COI, just as multiple MOEs may be aggregated to support a COI.

8.5. Success Criteria. HQ AFSPC (usually DR and/or DO), in cooperation with the operator (of the system under test) provides the RTA with clear pass/fail evaluation criteria. These criteria are based upon operational requirements and are documented in the test plan. If this information is not in the Operational Requirements Document (ORD) or similar requirements document or the ICBM Weapon System Mission Objectives Report, a separate command approved document, such as a Customized User Agreement (CUA), may be required. The CUA is normally used to state test limitations and to clarify requirements. The command lead/functional manager is responsible for developing the CUA.

8.6. Test Readiness Review Board (TRRB). The TRRB is a meeting to determine the readiness to enter a particular test. For testing directed by AFSPC test orders, the following organizations are normally represented: 595th TEG, system developer (as required), RTA, command/program lead, operational unit and supporting units. The test order will identify the organization to chair the TRRB. The 595th TEG will facilitate all TRRBs, prepare briefings, coordinate required organizations' attendance and publish any minutes resulting from the TRRB for all tests conducted as a result of a HQ AFSPC/DO issued test order.

8.6.1. If the system under test involves a development activity, the command lead or SPO briefs the following:

8.6.1.1. DT&E results.

8.6.1.2. Status and operational impact of deficiencies.

8.6.1.3. When and which organization will resolve DT&E deficiencies.

8.6.1.4. Status of spares, support equipment, documentation (operations/maintenance), training, maintenance capability and manpower.

8.6.1.5. Certification that the system is ready to enter test IAW AFM 63-119, ***Certification of System Readiness for Dedicated Test and Evaluation.***

8.6.2. The test manager briefs the following:

8.6.2.1. Test readiness.

8.6.2.2. Test objectives/schedule.

8.6.2.3. Availability of resources.

8.6.2.4. Problems impacting testing.

8.6.2.5. Test safety to include: identified hazards and mitigating measures; safety go/no-go criteria; safety responsibilities and authority; and abort or backout procedures if any.

8.6.2.6. Security issues, if any.

8.6.2.7. Limitations.

8.6.3. The operational unit's test support manager briefs the following:

8.6.3.1. Readiness of operations personnel, to include manning and training.

8.6.3.2. Readiness of logistics items such as spares, support equipment, resources and documentation.

8.6.3.3. Impacts, if any, to current operations or maintenance.

8.6.3.4. Safety issues, if any.

8.6.3.5. Security issues, if any.

8.6.3.6. Limitations.

8.6.4. At the conclusion of the formal briefings, a discussion with other players may be convened to ensure that there are no limiting factors that may affect the test team's ability to successfully conduct the test. At the conclusion, the chairperson makes a determination to begin the test or delay entry into test with reason(s) and corrective actions.

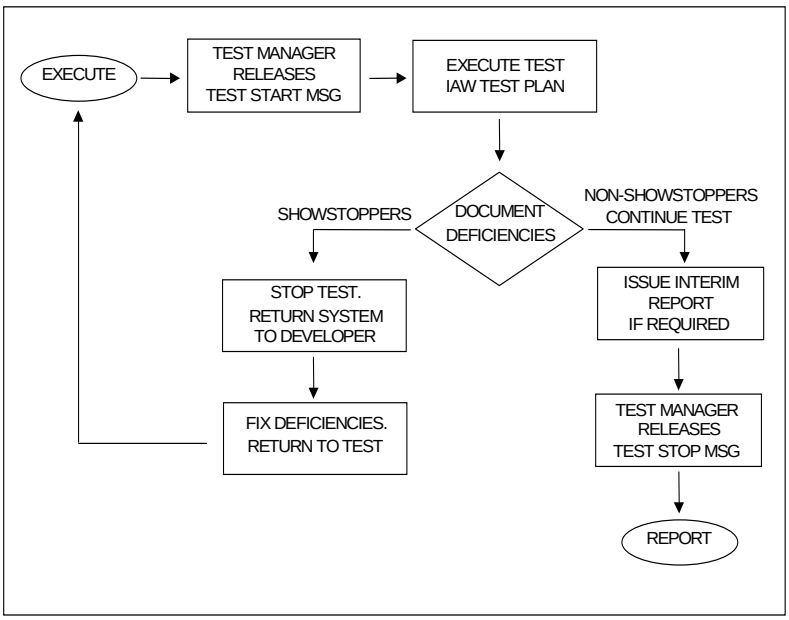
8.7. Launch Readiness Review (LRR). For ICBM flight testing, a LRR is held prior to launch to verify readiness. Safety, Weather, Comm and other Wing staff representatives report on readiness to launch and a go/no go decision is made.

9. AFSPC Test Execution:

9.1. Objectives. The RTA conducts testing in accordance with the approved test plan and DTPs (if developed). The test support manager is responsible for the overall safe conduct of the test. The RTA conducts additional testing as required to meet all test requirements.

9.2. Process. Upon approval from the TRRB (or LRR for ICBM flight tests) to begin test execution, the RTA conducts testing identified in the test plan. The RTA maintains primary responsibility for the conduct of testing. Problems requiring deviations for ICBM test unique technical data and equipment should be referred to 595th TEG for waiver authority. In order to keep AFSPC informed of the status of testing, several reporting requirements exist. Figure 7 shows a flowchart of the test execution process.

Figure 7. Test Execution Flowchart.



9.2.1. Test Start/Stop Messages. For testing resulting from an AFSPC test order, the test manager will transmit a Test Start Message no later than 24 hours prior to the first test event and a Test Stop Message within 24 hours after leaving the test location. The Test Start Message informs all concerned parties of the impending test and contains the following information: expected date/time of the first test event, test order number, estimated completion date and POC/phone number. The Test Stop Message is used to inform all participants that their support for the test is no longer needed and they can return to normal operations. At a minimum, the following offices are included in the distribution: NAF/CC, affected wing CC, affected group CC, HQ AFSPC DO/DOT/(applicable functional office, i.e., DOM, DOO, DOS, or DOY)/DOTO, SWC/CC/CV, the test requester, applicable SPO and HQ USAF/XONO (for ICBM systems). Test Start/Stop Messages are not required for ICBM FDE programs defined in paragraph **1.3.1.**

9.2.2. Interim Summary Report. For tests of long duration, the test order may require a summary of testing results before the completion of the test. Under this situation, the RTA will provide an interim summary report to the same addresses listed in paragraph 9.2.1. The contents and format are outlined in the final report format in AFI 99-102.

9.2.3. Deficiency Reporting. A deficiency is a condition that degrades system performance, prevents mission accomplishment or endangers personnel. Technical Order 00-35D-54, ***USAF Defi-***

ciency Reporting and Investigation System, identifies two categories of deficiencies: Cat I and Cat II. A Cat I deficiency report (DR) is one where: a) if uncorrected, would cause death, severe injury or severe occupational illness, or; b) if uncorrected, would cause major loss or damage to equipment or a system, or; c) directly restricts combat or operational readiness. A Cat II DR addresses all other conditions to include enhancements to the system. Timelines for reporting deficiencies are listed in the Technical Order. During test reporting, deficiencies will be prioritized based on impact to mission accomplishment. As a minimum, all Cat I deficiencies and the top ten prioritized Cat II deficiencies will be included in the final test report. The command lead is responsible for tracking the resolution of DRs after the final test Deficiency Review Board (DRB). For ICBM testing, a Launch Analysis Group (LAG) (instead of a DRB) is convened to analyze and resolve deficiencies found during ICBM launch. More information on deficiency reporting can be found in AFI 99-102 and Technical Order 00-35D-54.

9.3. Safety Concerns. During testing, if any unsafe or potentially hazardous condition arises, all test activity will stop until the condition is removed or corrected. The test support manager is responsible for the overall safe conduct of the test. Report mishaps according to AFI 91-204, ***Investigating and Reporting US Air Force Mishaps***. The host base safety office, at the test location, will be the reporting agency unless specified otherwise in the test order.

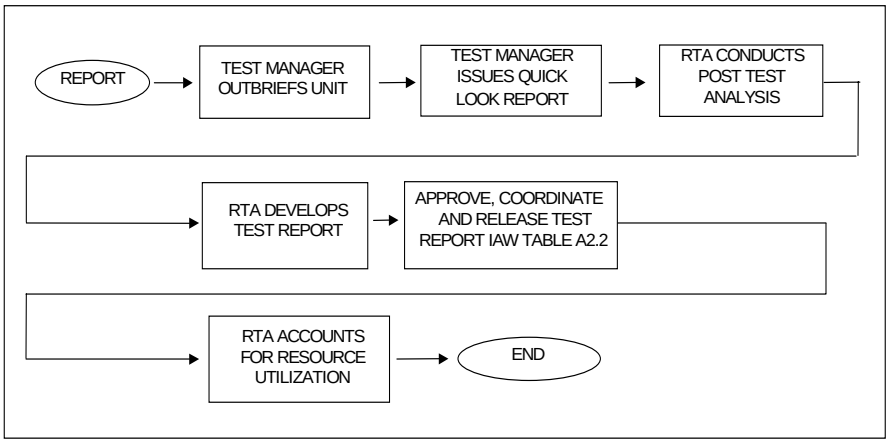
9.4. Security Concerns. Standard security practices and procedures will not be compromised to accomplish test objectives. The test manager and test support manager are jointly responsible to ensure that appropriate security measures are followed.

10. AFSPC Test Reporting:

10.1. Objectives. OT&E provides senior decision-makers and operators necessary information on system performance. The RTA will report OT&E results IAW AFI 99-102.

Process. RTAs review the test data to ensure all test requirements are met. Upon test completion, the RTA generates a quick look report and a final test report. **Figure 8.** shows a flowchart of the test reporting process.

Figure 8. Test Reporting Flowchart.



10.1.1. Quick Look Report. For testing resulting from an AFSPC test order, the RTA will provide a quick look report to those agencies listed in paragraph **9.2.1.** within 72 hours of the last test event. The last test event is defined in the test plan and may be linked to the receipt of all necessary test data. The following information should be included in this report: date/time of the last test event, test order number (if applicable), initial observations, preliminary conclusions and the POC/phone number. The report will also state that any preliminary conclusions are subject to change when data analysis and evaluation are completed and the final report is published.

10.1.2. Final Test Report. The RTA writes the final report. It includes test results, comments on test constraints or limitations, operational impacts identified, test anomalies, safety mishaps and conclusions. Test reports are approved IAW **Table A2.2.** The final report must be approved no later than 60 calendar days after the last test event. The last test event is defined in the test plan and may be linked to the receipt of all necessary test data. The final report provides a formal, permanent record of the results of all phases of the test.

10.1.3. Report Distribution. For testing directed by an AFSPC test order, the following offices will receive a copy of the report after being cleared for release IAW Table A2.2: the office requesting the test, the affected unit, group and wing commanders, HQ AFSPC/DOTO, applicable HQ AFSPC operations divisions (DOM, DOO, DOS, or DOY), applicable HQ AFSPC/LG/DR divisions (to include HQ AFSPC/LGM(M)), HQ AFSPC/HO/SEW, applicable NAF/DO/LG, 595th TEG, applicable SPO, applicable test squadron, HQ USAF Weapons School, Space Division and HQ USSPACECOM/J6C for test reports on a component or subsystem of the ITW/AA System. Additional addressees may be required based upon the nature of the test. For tests conducted by the 595th TEG test squadrons, the test manager submits two copies of the approved test report to DTIC.

10.2. Briefings. The needs of the customer requesting the test must be carefully evaluated in determining briefing requirements. In some cases, rapid feedback of approximate test outcomes may be required to guide concurrent development efforts and operational decisions. In other cases, a briefing coinciding with the final report may be more appropriate. In all cases, reporting must include adequate details of test scenarios, processes, anomalies encountered and deviations from planned test procedures. These details enable the customer to properly interpret the test results. The test manager will out-brief the unit affected by the test. Final report briefings are scheduled by the RTA, as needed (or by request).

GARY R. DYLEWSKI, Brig Gen, USAF
Director of Operations

Attachment 1

GLOSSARY OF TERMS

Terms

Advanced Concept Technology Demonstration (ACTD)—A means of rapidly demonstrating the use of advanced technologies to address urgent military needs. ACTDs are designed to rapidly transfer technology from developers to users. Demonstrations are jointly developed and implemented with the operational user, tester and development communities as key participants.

Annual Test Prioritization Integrated Product Team (IPT)—An AFSPC mid-level management review conducted normally in January each year to prioritize command OT&E programs.

Battlelab Initiative—Innovative or revolutionary operations or logistics concept capable of improving the Air Force's capability to execute its core competencies. It is not a part of the formal acquisition process or formal operational testing, but is a "demonstration" under the direction of the sponsoring battlelab. Operational testers may assist in demonstration planning and execution.

Critical Operational Issue (COI)—A key question that must be examined in test and evaluation to determine the system's capability to perform its mission. Testers normally phrase a COI as a question to be answered in evaluating a system's operational effectiveness or suitability.

Customized User Agreement (CUA)—A command approved document normally used to clarify the ORD or other operational requirements documents and/or to state test limitations. In the event an ORD has not been signed, is out-of-date, or doesn't exist, a CUA may be written to establish testable requirements and credible criteria. Although there is no set format for the CUA, it is usually in letter format. The command lead/functional manager is responsible for developing the CUA and should coordinate the CUA through the RTA and the operational unit.

Detailed Test Procedure (DTP)—Procedural instructions that provide the basis for day-to-day mission scheduling, test control data collection, management, analysis and reporting results. DTPs can be a stand-alone document or an attachment to the test plan.

Follow-on Operational Test & Evaluation (FOT&E)—Normally an AFOTEC function, the continuation of IOT&E or QOT&E activities past the MS III decision. FOT&E answers specific questions about unresolved COIs and test issues, or completes areas not finished during the I/QOT&E. It ensures the initial system acquisition process is complete.

Force Development Evaluation (FDE)—The evaluation, demonstration, exercise, or analysis of fielded, operational systems during the sustainment portion of the system life cycle. FDE focuses on the MAJCOM's operational employment and sustainment of fielded systems after I/QOT&E and/or FOT&E are complete.

Initial OT&E (IOT&E)—The operational test and evaluation conducted by AFOTEC on production or production-representative articles to help decide whether to proceed beyond low-rate initial production. IOT&E is conducted to measure how well the system attains operational effectiveness and suitability.

Installation & Checkout (I&C)—AFSPC units conduct I&C to support the operational acceptance of sustaining engineering activities and processing equipment swaps covered by operational technical manuals and checklists. I&C activities are also appropriate for routine updates to operational databases which do not directly affect or have the potential to affect mission accomplishment and following

maintenance of software that does not add new capabilities to the system (e.g., maintenance releases, database changes, commercial off-the-shelf software (COTS) updates, etc.). Additionally, I&C activities may be used to support acceptance of SPO modifications being installed at multiple sites after the initial site passes a successful OT&E.

Launch Director (LD)—The 576 FLTS staff officer, who directs range users, instrumentation checkout, countdowns and integrates receipt-through-launch operations and maintenance tasks. Serves as the single point of contact for coordination between the 576 FLTS test managers, task force commander and all Vandenberg AFB agencies.

Launch Readiness Review (LRR)—Hosted by the wing where the launch will take place and chaired by the wing commander. The purpose is to give the wing commander confidence that all participants are ready for launch. The wing commander surveys all participants on readiness status and bases the go/ no-go decision on answers given at the LRR.

Measures of Effectiveness (MOE)—A qualitative or quantitative measure of a system's performance or a characteristic that indicates the degree to which it performs the task or meets a requirement under specified conditions. Where possible, MOEs should be defined to measure operational capabilities in terms of engagement or battle outcomes.

Measures of Performance (MOP)—A quantitative measure of the lowest level of physical performance (e.g., range, velocity, payload).

Operational Assessment (OA)—An analysis of potential operational effectiveness and suitability, typically made by AFOTEC, with user support as required, on other than production systems. The focus of an operational assessment is on significant trends noted in development efforts, programmatic voids, areas of risk, adequacy of requirements and the ability of the program to support adequate operational testing. Operational assessments may be made at any time using technology demonstrators, prototypes, mockups, engineering development models, or simulations, but will not substitute for the independent OT&E necessary to support full production decisions.

Operational Test Agency (OTA)—The command or agency designated by the Program Management Directive or other appropriate program directive as responsible for managing the independent OT&E of a system. AFOTEC is the Air Force OTA.

Operational Test and Evaluation (OT&E)—Testing and evaluation conducted in as realistic an operational environment as possible to estimate the prospective system's operational effectiveness and operational suitability. In addition, OT&E provides information on organization, personnel requirements, doctrine and tactics. It may also provide data to support or verify material in operating instructions, publications and handbooks.

Operational Utility Evaluation (OUE)—Highly streamlined, flexible OT&E activities, typically conducted by AFOTEC, designed to obtain quick-look assessment of military worth. They are used anytime testing does not fall into one of the other major categories of OT&E. OUEs are highly flexible in planning and reporting formats and adjustable to customer needs. They are conducted outside the normal scope of operational testing activities and are limited in time, scope and resources. They may be used when required information cannot be obtained from OT&E, but will not be used in lieu of IOT&E, QOT&E, or FOT&E.

Participating Test Agency (PTA)—A test organization required to provide specific resources during DT&E or OT&E.

Qualification OT&E (QOT&E)—The operational testing performed on programs instead of IOT&E for which there is no RDT&E-funded development effort.

Responsible Test Agency (RTA)—The lead test organization responsible for the test planning, oversight of test execution and reporting of test results.

Space Warfare Center (SWC)—Parent organization of the 595th TEG. The 17 TS and 576 FLTS are assigned to the 595th TEG. The 595th TEG is the Test and Evaluation Agency for AFSPC.

Sustaining Engineering—Minor evolutionary upgrades to hardware and/or software which do not impact the system or mission accomplishment, or require the system to be fully tested prior to being brought on-line. Normal system or sub-system checkout is not considered part of system testing in this occurrence.

System Program Office (SPO)—The organization comprised of technical, administrative and business management personnel assigned full-time to a system program director. The office may be augmented with additional personnel from participating organizations.

Tactics Development and Evaluation (TD&E)—TD&E is a subset of FDE specifically designed to further exploit system capabilities and tactics during the sustainment portion of the system's life cycle. It includes the research, demonstration, exercise, analysis and evaluation of specific employment tactics against anticipated threats.

Technical Performance Evaluation (TPE)—CJCSI 5119.01, 5 Dec 94, tasks USCINCSPACE to conduct an annual end-to-end test of the ITW/AA System. The purpose of the TPE program is to characterize ITW/AA System technical integrity and operational capability for USCINCSPACE. The TPE program is described in NUJPD 99-1 and consists of two key components. The first component entails conducting an annual end-to-end test of the worldwide operational ITW/AA System. The second consists of evaluating live missile and space event data throughout the year. This approach provides for a comprehensive evaluation of system performance. HQ USSPACECOM/J6C provides the funding for the TPE program and will submit a test request to HQ AFSPC/DOT for each TPE. For ITW/AA Systems, Operations Approval Board approval is required before operational use. When conducting tests involving the ITW/AA System, also refer to NUI 10-21***, Change Control Management Process for ITW/AA Systems***, 1 May 98.

Test Manager (TM)—The person identified by the RTA as the focal point for test planning, test conduct and reporting on the OT&E program.

Test Order (TO)—A formal tasking document that outlines the background and purpose of the test, its objective and scope, responsibilities, physical, materiel, financial, personnel, priority and reporting requirements. For long duration projects, supplementing information may be documented in a test order annex. Attachment 4 contains the test order format.

Test Plan (TP)—A formal document produced by the RTA providing the complete detailed, coordinated and integrated plan for conducting a test to answer COIs.

Test Request (TR)—A formal document produced by the customer and sent to HQ AFSPC/DOT. This document outlines test requirements and initiates the test process. **Attachment 3** contains the TR format.

Test Resources Plan (TRP)—The basic resource management document produced by the RTA used throughout the test planning process. It identifies resources required to support testing and is the basis for budget submissions, manpower planning and procurement lead-time.

Test Readiness Review Board (TRRB)—A formal board convened to give the approval for a program to begin test execution.

Test Support Manager (TSM)—The person identified at the wing or unit level that supports the RTA in planning and conducting the test.

Test Support Organization (TSO)—An operational wing/unit assigned to support the RTA with a Test Support Manager and test team members for a specific OT&E.

Test Squadrons (TS)—Short title used to identify AFSPC's two test squadrons, the 17 TS and the 576 FLTS.

Test Team (TT)—The test team can be a combination of full- and part-time, permanently or temporarily assigned personnel that report to the TSM/LD. Team training requirements vary according to the scope of the testing. When possible, the system user organization provides test team members. When this is not possible, HQ AFSPC will coordinate manning requirements identified in the TRP to provide required manpower positions.

17th Test Squadron (17 TS)—AFSPC's executing arm to prepare, conduct and report on MAJCOM-conducted OT&E of space systems.

576th Flight Test Squadron (576 FLTS)—AFSPC's executing arm to prepare, conduct and report on MAJCOM-conducted OT&E of ICBM systems.

Attachment 2

DESIGNATED APPROVAL AUTHORITIES

Table A2.1. Designated Approval Authority for Test Plans.

	Release	Coordinate	Approve
External Agency Conducted DT&E (Note 1)	As appropriate	Wing CC NAF	HQ AFSPC/DO
Test Squadron Conducted OT&E	SWC/CC	Wing CC 20 AF (Missile Operations Only)	HQ AFSPC/DO
TPE	SWC/CC	N/A	HQ AFSPC/DO USSPACECOM/J6
SWC-Internal OT&E	SWC/CC	N/A	HQ AFSPC/DO
External Agency Conducted OT&E (Excluding AFOTEC) (Note 1)	As appropriate	Wing CC NAF	HQ AFSPC/DO
ACTDs	As appropriate	595th TEG/CC	HQ AFSPC/DO
I&C (Note 2)	Wing	Wing	Wing

Notes:

1. External agencies should send test plans to HQ AFSPC/DOT for AFSPC coordination.

2. I&C is listed on this table for clarification as to which office approves it. I&C is not an OT&E activity.

Table A2.2. Designated Approval Authority for Test Reports.

	Approve	Coordinate	Release
Test Squadron Conducted OT&E	SWC/CC	N/A	HQ AFSPC/DO
TPE	SWC/CC	HQ AFSPC/DO (Endorsed)	USSPACECOM/J6
SWC-Internal OT&E	SWC/CC	N/A	HQ AFSPC/DO
External Agency Conducted OT&E (Excluding AFOTEC)	As appropriate	N/A	N/A
ACTDs	As appropriate	595th TEG/CC	HQ AFSPC/DO
I&C	Wing	Wing	Wing

Attachment 3

TEST REQUEST FORMAT

A3.1. Test Requests. A TR is used to request test squadron support. It is forwarded to HQ AFSPC/DOT. The test request is designed to provide as much information about the proposed test as possible. Program/system documents (ORD, RCM, CONOPS, Systems Operational Protection Guide (SOPG), etc.) should be attached to the test request. Address any lack of required documentation in the test request. In some instances, the information about the T&E may not be known or available; however, the requester should make every effort to collect all possible data to ensure a complete and comprehensive test request is submitted. If the test supports USSPACECOM/J6C certification (ITW/AA), the agency initiating the test request will forward a copy of the test request to USSPACECOM/J6C for their involvement.

MEMORANDUM FOR HQ AFSPC/DOT

FROM: (Requesting Agency)

SUBJECT: Test Request for _____

1. INTRODUCTION AND BACKGROUND. Describe the history leading to this test request and any background information relevant to this test request.

2. OPERATIONAL CONCEPT. Provide a short operational concept that describes the system, cost of the system, how the system supports a mission area(s) and how the system is/will be operationally employed. List existing PMD guidance, operational requirements documents and concepts of operations, if applicable.

3. PURPOSE. Provide a general statement of the overall purpose of this test. State why the test is required, the critical questions the test is to answer and how the results will be used.

4. RISK. Characterize the risk to mission accomplishment if this system is not tested. Include a risk assessment in terms of hardware, software and integration.

5. TEST METHODOLOGY. If known, outline specific methods and scope of conducting the test that may benefit test personnel.

6. SUPPORTING ORGANIZATIONS. If known, include all agencies that may support the test and points of contact (with phone numbers). Include general responsibilities of each.

7. TEST RESOURCE REQUIREMENTS. If known, list required resources, availability and locations. List source of funding (i.e., 3400, 3600) and manpower to conduct the requested test.

8. TEST MILESTONES. If known, indicate desired test start date and date final report is required. In general, list all dates of significance.

9. ADDITIONAL INFORMATION. Submit any additional information or documentation (i.e., ORD, RCM, CONOPS, SOPG, etc.) that will be helpful in evaluating the request and in designing a test. attach information as available.

*** SIGNED ***

(HQ AFSPC division level, or operations group/wing CC level)

Attachment 4

TEST ORDER FORMAT

MEMORANDUM FOR: {Center to which RTA is assigned} (date)

FROM: HQ AFSPC/DO

150 Vandenberg St. Ste 1105

Peterson AFB CO 80914-4240

SUBJECT: Test order for {OT&E Program Title, type of OT&E}

AFSPC TEST ORDER NUMBER: _____ (FY XX-Sequential)

1. INTRODUCTION:

2. PURPOSE:

3. DESCRIPTION:

4. CONCEPT OF EMPLOYMENT:

5. OT&E TEST PLAN: Provide guidance for test plan development and approval.

6. RESPONSIBILITIES: Indicate the RTA responsibilities, any additional agencies participating in test, the wing/unit Test Support Organization responsibilities, the organization to chair the TRRB and how communication between the agencies should be conducted.

7. TARGET DATES: Include test start and end dates.

8. TEST REPORTS: Provide guidance and direction for required reports.

9. AUTHORITY: Indicate test authority -- Air Force-directed test or AFSPC-directed test.

10. RESOURCES: Provide general guidance on expenditure of resources programmed for the project. Include program element code used to pay for the test.

11. SAFETY: Identify specific safety considerations, hazard analysis and safety review target dates. Identify planned waivers from regulatory guidance or approved operating procedures.

12. RELEASE OF INFORMATION: Any release of information outside the test channels must be coordinated with HQ AFSPC/DOT and the command program manager.

13. SECURITY: Comply with AFI 31-401, ***Managing the Information Security Program***.

14. ENVIRONMENTAL IMPACT CONSIDERATIONS:

15. STATEMENT OF INVESTIGATION: "An investigation has determined that the objectives contained in this test do not duplicate previous or current testing accomplished by this or any other government agency.

*** SIGNED **